CONFERENCE ON DISARMAMENT

CD/1269
15 August 1994

Original: ENGLISH

LETTER DATED 12 AUGUST 1994 FROM THE LEADER OF THE DELEGATION OF THE UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND TO THE CONFERENCE ADDRESSED TO THE SECRETARY-GENERAL OF THE CONFERENCE ON DISARMAMENT TRANSMITTING A NOTE REGARDING THE PROPOSAL OF THE UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND FOR A CODE OF CONDUCT FOR EXPORTS OF ANTI-PERSONNEL LANDMINES

I have the honour to send you herewith a Note regarding the proposal of the United Kingdom for a Code of Conduct for exports of anti-personnel landmines.

In view of the urgency of the situation, the United Kingdom is proposing an ad hoc, free-standing arrangement to which all States will be able to subscribe. This will neither conflict with national measures, nor prejudice or stand in the way of any subsequent actions which may be taken by the international community to deal with the landmine problem.

I would be grateful if you could see that this note be circulated as an official document of the Conference on Disarmament.

(Signed) M.C.S. Weston
Ambassador

GE.94-63732 (E)

PROPOSED CODE OF CONDUCT FOR EXPORTS OF ANTI-PERSONNEL LANDMINES

1. States decide to implement the terms of Protocol II of the 1980 Weaponry Convention. (*)

2. In view of the terrible injuries caused to civilians in many countries by the irresponsible use of landmines, States will not export any anti-personnel landmines in their possession to countries not party to Protocol II of the 1980 Weaponry Convention.

2 bis. In addition, States observing this Code will not exchange with each other any anti-personnel landmines which are not fitted with a self-destructing or self-neutralising mechanism.

3. States decide to implement any national legislation required to bring these measures into force. The measures will include end-user provisions to ensure that anti-personnel landmines supplied in accordance with the Code do not come into the possession of states or groups not observing the Code.

4. States decide to continue all endeavours to find a comprehensive solution to the overwhelming humanitarian problems created by the proliferation of landmines. This includes giving favourable consideration to requests for aid in mine clearance and training for demining.

5. States call upon all States Parties to the 1980 Weaponry Convention to subscribe to, and on other States also to implement, the provisions of this Code.

6. States decide to exchange information on their export control provisions (and advice for those who need to introduce new measures).

7. States will supply all other Code subscribers with information if any state finds reason under the Code to deny a request for sales of anti-personnel landmines (to ensure others are alert to possible approaches by the same customer).

8. States will exchange information and co-ordinate humanitarian assistance on demining and related activities.

9. States will consider possible action to be taken in case of a suspected infraction by a subscriber to the Code (to consist, initially, of pressure from other subscribers on the state in question to explain itself and to conform).

(*) ie, even if a given state has not ratified this protocol.

CONFERENCE ON DISARMAMENT

CD/1270
19 August 1994

Original: ENGLISH

PROGRESS REPORT TO THE CONFERENCE ON DISARMAMENT
ON THE THIRTY-NINTH SESSION OF THE AD HOC GROUP OF
SCIENTIFIC EXPERTS TO CONSIDER INTERNATIONAL COOPERATIVE
MEASURES TO DETECT AND IDENTIFY SEISMIC EVENTS

1. The Ad Hoc Group of Scientific Experts to Consider International Cooperative Measures to Detect and Identify Seismic Events, initially established in pursuance of the decision taken by the Conference of the Committee on Disarmament on 22 July 1976, held its thirty-ninth formal session from 8 to 19 August 1994, in the Palais des Nations, Geneva, under the Chairmanship of Dr. Ola Dahlman of Sweden. This was the thirty-first session of the Group, convened under its new mandate by the decision of the Committee on Disarmament at its 48th meeting on 7 August 1979.

2. The Ad Hoc Group is open to all member States of the Conference on Disarmament. It is also open on a standing basis to all non-member States which have been invited upon their request by the Conference on Disarmament to participate in its work. Accordingly, scientific experts and representatives of the following member States of the Conference on Disarmament participated in the session: Argentina, Australia, Belgium, Bulgaria, Canada, China, Egypt, France, Germany, Hungary, India, Iran (Islamic Republic of), Italy, Japan, Netherlands, Pakistan, Peru, Poland, Russian Federation, Sweden, United Kingdom of Great Britain and Northern Ireland and the United States of America.

3. Scientific experts and representatives from the following non-member States of the Conference on Disarmament participated in the session: Austria, Czech Republic, Denmark, Finland, Israel, Republic of Korea, New Zealand, Norway, South Africa, Spain and Switzerland.

4. During the session 39 papers containing information on national investigations related to the work of the Group were presented by experts from: Argentina, Australia, Austria, Belgium, Bulgaria, Canada, Czech Republic, Denmark, Finland, France, Germany, Hungary, India, Italy, Japan, New Zealand, Norway, Peru, Russian Federation, South Africa, Spain, Sweden, Switzerland, United Kingdom and United States of America.

5. The session was devoted to continuing the preparations for the upcoming full scale phase of the Ad Hoc Group's third Technical Test (GSETT-3), which is an effort to develop, test and evaluate new concepts for an experimental International Seismic Monitoring System. A report summarizing the knowledge and experience on GSETT-3, including the overall concept of GSETT-3, the functions and components of the system and matters of organization and cost has previously been presented to the Ad Hoc Committee on a Nuclear Test Ban and is provided to the Conference on Disarmament as document CD/1254.

6. The current plans call for the full-scale phase of IDC operation during GSETT-3 to begin by 1 January 1995. The Group reviewed its schedule to meet this date presented in CD/1245 and noted that the work is

progressing. Particularly noteworthy is the rapid progress in developing and conducting operations at the IDC. Plans for conducting and evaluating GSETT-3 have been developed in considerable detail. The remaining tasks are as follows (note that the various versions of the experimental International Data Center (IDC) are explained in CD/1245)

August-October 1994:	Continue step-by-step implementation of stations, communications network and national facilities
	Operate IDC Version 2a
October 1994:	IDC Version 2b implemented
October-December 1994:	Coordinate participation of countries and stations
	Coordinate elements of the experimental system
	Conduct quality assurance evaluation of the IDC
1 January 1995:	IDC Version 3 implemented
	Begin full-scale tests
	Begin evaluation of performance

7. The Ad Hoc Group recognizes that not all of the seismological stations envisaged for participation in GSETT-3 will be ready to provide data to the IDC by 1 January 1995. Nevertheless, the Group considers that the number of stations already committed, or expected to be committed during the remainder of 1994, will permit full-scale testing by that date.

8. Although it is recognized that the commitments required from participating States will involve allocation of considerable resources, it is difficult to give any precise indication of the duration of the GSETT-3 experiment. For financial planning purposes, countries participating in GSETT-3 should be prepared to support their national facilities and their communication links for a minimum of 1 year after the start of the full scale experiment.

It is of particular importance to ensure financial resources for continuous data transmission, and for operation of other facilities during GSETT-3. Countries are encouraged to assist by providing technical and financial assistance in these areas to other countries whose participation is essential.

9. A summary of the current status of participation of countries with seismological stations or with gamma data for GSETT-3 is given in Annex I. This Annex also lists countries from which commitments are still lacking for either Alpha or Beta stations.

10. The Ad Hoc Group has now defined an Alpha station network of 58 stations in 34 countries out of which 38 stations in 17 countries are currently committed for participation in GSETT-3. Efforts are now concentrating on obtaining commitments for the remaining stations. The number of Alpha stations contributing data to the IDC has increased from 6 (in February) to 12 today and is expected to further increase to around 23 by the end of August.

11. The Ad Hoc Group has received information from 29 countries on plans for a total of 93 Beta stations, out of which 76 stations in 22 countries are already committed for participation in GSETT-3. To ensure adequate global coverage of the Beta station network, the Chairman of the Ad Hoc Group has approached 21 countries - mostly countries not represented in the Ad Hoc Group - asking for consent to use data from stations already in existence in these countries, for the purposes of GSETT-3. The number of Beta stations contributing data to the IDC has increased from 13 in February to 21 today.

12. The Ad Hoc Group conducted in-depth discussions of the results of the three working groups that it has established to deal with the planning, operation and evaluation of GSETT-3. Several meetings of these working groups were held during the session. Summaries of the status of the efforts of these three working groups are annexed to this progress report.

13. A complete draft version of the overall GSETT-3 documentation, including the plan for GSETT-3 operational manuals factual description of facilities to be used, an evaluation plan and a number of technical annexes, was prepared. This voluminous documentation (more than 500 pages) forms the basis for operations manuals and procedures for GSETT-3. It will also contain technical summaries of IDC and station operations and ongoing evaluation results during GSETT-3. Previous experience has shown that documentation of this type is essential. The documentation will be revised along the way, with a complete updated set distributed before 1 January 1995, and with the most current version at any time being electronically available on-line for the participants during GSETT-3.

14. In accordance with the schedule given in CD/1245, operation of Version 1 of the GSETT-3 IDC concluded on 30 June 1994. Subsequently, operation of Version 2A, which includes new participants, stations, software, hardware and processing objectives, began. International staffing of the IDC is an important objective of the Working Group on Operations. During the session applications for positions at the IDC were reviewed and qualified applicants were selected. Offers will be extended to the successful applicants.

15. The Working Group on Evaluation has concluded that much of the information required to evaluate GSETT-3 could be provided by the IDC. However, many of the tasks outlined in the evaluation volume of the GSETT-3 documentation can only be carried out at NDCs or through national investigations. The Working Group, seeking to obtain wider participation in these efforts, distributed a questionnaire during the session, asking national delegations to contribute. Positive responses from 25 countries were received. The Working Group also reached agreement on the evaluation volume of the documentation and on the evaluation format.

16. The Ad Hoc Group received and appreciated a briefing from the Chairman of the Nuclear Test Ban Committee's Working Group on Verification.

17. The Ad Hoc Group noted with appreciation the convening of an informal technical workshop on preparations for GSETT-3 in Alexandria, Virginia, USA from 25 through 29 April 1994. The workshop was attended by 28 participants from 12 countries. The Working Group on Evaluation met during the workshop, and also visited the IDC. Draft material compiled by those who participated in this workshop contributed significantly to the concepts and procedures embodied in the GSETT-3 documentation being prepared by the GSETT-3 Working Groups.

18. The Ad Hoc Group received a letter from the International Seismological Centre (ISC) proposing cooperation between the Group and ISC. Specifically, the ISC requests to receive the GSETT-3 bulletin and seismic phase data on a regular basis. The Ad Hoc Group agreed in principle to

provide these data to the scientific community in a suitable manner and at a suitable time. The Group appreciated the offer of Ms. Hilary Trodd of the UK to act as a contact person with the ISC.

19. The Ad Hoc Group suggests that its next session, subject to approval by the Conference on Disarmament, should be convened from 20 February to 3 March 1995. The main task during this session will be to review and evaluate initial results from the full-scale phase of GSETT-3. A draft work program is presented in Annex V.

***

Annex I: Status of GSETT3 Station and Gamma Data Committments

Country	Alpha Stations Envisaged by GSE	Beta Stations Offered	Station Committment Status	Date Available to the IDC	Gamma Data Committed
Argentina	1	-	committed	Dec. 1994	yes
Australia	5	11	committed	Aug./Sept.1994	yes
Austria	0	1	lacking	unknown	-
Belgium	0	0	not applicable	not applicable	yes
Bolivia	1	-	lacking	unknown	-
Botswana	1	-	lacking	unknown	-
Brazil	1	0	committed	unknown	-
Bulgaria	0	1	committed	July 1995	yes
Canada	6	18	committed	Now/Sept. 1994	yes
Cen. Afr. Republic	1	-	committed	unknown	-
China	3	1	lacking	unknown	-
Cook Islands	0	1	committed	now	-
Czech Republic	0	1	committed	Sept. 1994	yes
Denmark	1	0	lacking	July 1995	yes
Egypt	1	0	lacking	unknown	-
Finland	1	4	committed	now/Nov. 1994	yes
France	1	0	committed	Jan. 1995	yes
Germany	1	9	lacking	unknown	-
Hungary	0	1	committed	now	yes
India	1	0	committed	unknown	-
Indonesia	1	-	lacking	unknown	-
Iran	0	1	lacking	June 1995	yes
Israel	0	1	lacking	Nov. 1994	-
Italy	0	2	committed	now	yes
Ivory Coast	1	-	lacking	unknown	-
Japan	1	7	committed	Sept. 1994	yes
Kazakhstan	1	-	lacking	unknown	-
Kenya	1	-	lacking	unknown	-
Rep. of Korea	1	-	lacking	unknown	-
Mexico	1	2	lacking	unknown	-
Netherlands	0	1	committed	Aug. 1994	yes
N. Africa (XAF)	1	-	lacking	unknown	-
New Zealand	0	1	committed	now	yes
Norway	3	1	committed	now/Oct. 1994	yes
Pakistan	1	1	committed	expect Jan.1995	-
Papua New Guinea	1	-	lacking	unknown	-
Paraguay	1	-	lacking	unknown	-
Peru	0	1	committed	Dec. 1994	-
Poland	0	1	lacking	unknown	yes
Romania	0	1	committed	Sept. 1994	yes
Russian Federation	5	5	committed	Jan. 1995	-
S. America (XSA)	1	-	lacking	unknown	-
South Africa	1	1	committed	Aug./ Dec. 1994	yes
Spain	1	2	committed	Jan. 1995	yes
Sweden	1	0	committed	Sept. 1994	yes
Switzerland	0	1	committed	Jan. 1995	yes
Thailand	1	-	lacking	unknown	-
Turkey	1	-	lacking	unknown	-
Turkmenistan	1	-	committed	unknown	-
United Kingdom	0	2	committed	Oct. 1994	yes
United States	7	12	committed	Aug.- Nov. 1994	yes
Western Samoa	0	1	committed	now	-
Zambia	0	1	lacking	unknown	-
TOTAL (Committed)	58 (38)	93 (76)	29 Countries		24

August 18, 1994

See Annex II for additional details

PRELIMINARY GSETT-3 ALPHA NETWORK
AS OF 19 AUGUST 1994

ANNEX II

Status Report from GSETT-3 Working Group on Planning

GSETT-3 Documentation

The drafting of GSETT-3 Documentation has been prepared as draft CRP/243 and currently comprises five volumes, as detailed in paragraph 13 of this progress report. Agreement was reached on all essential issues in this draft version of CRP/243 during the discussions at the 39th session, and the GSETT-3 Working Groups through their convenors were given the authority to revise this draft in the light of comments made and agreement reached in the GSE.

The draft version of CRP/243 is open to comments and suggestions by GSE delegates until 1 September 1994. Such comments should be sent to the appropriate working group convenors. The working groups will complete their review and provide material to the GSETT-3 Documentation Editor by 15 September 1994. The revised CRP/243 will then be distributed to the GSE delegates by the GSETT-3 Documentation Editor prior to the start of the full-scale testing on 1 January 1995.

Volume 3 of the GSETT-3 Documentation will contain so-called Countrybooks, with detailed technical descriptions of the GSETT-3 facilities (seismic stations, communication arrangements, etc.) in participating countries. The designated technical point of contact in each country has received from the GSETT-3 Documentation Editor detailed instructions on how to provide the material needed, together with a Countrybook template. Those who have not already done so, are asked to provide the information requested as soon as possible. Countries that have not yet designated a technical point of contact should do so as soon as possible, and they will then receive the appropriate documentation.

GSETT-3 Participation

Alpha stations

The GSE has now defined an Alpha network of 58 stations in 34 countries. Currently there are commitments by 17 host countries for 38 of these stations. For another 8 stations (in China, Denmark, Egypt, Germany, Iran and Mexico), the GSE (or the Working Group on Planning) has received information that there are concrete technical plans to contribute to GSETT-3, but that the formal commitment is pending.

There are eleven countries (Bolivia, Botswana, Indonesia, Ivory Coast, Kazakhstan, Kenya, Republic of Korea, Papua New Guinea, Paraguay, Thailand and Turkey) with planned Alpha network stations on their territory that have not yet responded concretely to the various requests for cooperation and commitment. It is currently the highest priority task of the Working Group on Planning to assist the GSE Chair in approaching these countries one more time. In addition, the GSE has envisaged two stations (in northern South America and in the northern part of Africa, respectively) at locations that are yet to be determined. Work is under way to identify countries that could host these two stations.

Beta stations

To date, the GSE has received information about 93 planned Beta stations, out of which 76 in 22 countries are committed for participation in GSETT-3. The vast majority of these stations are in countries participating in the GSE sessions.

The GSE chairman has approached the FDSN (Federation of Digital Seismograph Networks) and asked them to identify, in cooperation with its member networks, stations that might be utilized for GSETT-3. So far, the FDSN member networks IRIS and GEOFON have provided positive responses to this request.

Through this process, many countries have been identified that have stations on their territory that would be of potential interest as Beta stations in GSETT-3. For such Beta network candidate stations, the GSE chairman is seeking formal commitment for participation in GSETT-3 in direct contact with the authorities of the countries concerned. For many such stations, data are already openly available, and the only issue is to obtain a consent to use the data in question for the purposes of GSETT-3. To obtain such commitment or consent, the GSE chairman has so far written to 21 countries. Countries that have previously presented plans for participation with Beta stations have so far not been asked to commit additional stations.

ANNEX III

Status Report from GSETT-3 Working Group on Operations

Drafting of the GSETT-3 documentation on operations has proceeded in line with GSE/WGP,WGO, WGE/1, a large amount of documentation material had been gathered, compiled and distributed to GSE delegates.

Draft manuals for the GSETT-3 Seismic Station Operations, National Data Center Operations and International Data Center Operations have been distributed. The Operations Working Group has also been responsible for the compilation of draft annexes on the Formats and Protocols for Data Exchange (Annex 3), the GSE Database Structure and Attributes (Annex 4) and the GSETT-3 System Security Plan (Annex 5). Those sections of this documentation that are most important for successful, initial full scale operations in January 1995 have been reviewed both in open Operations Working Group meetings and GSE sessions and suggestions for additions, deletions and modifications of the documentation have been collected. These will be incorporated in revised versions of the documentation which will be distributed as quickly as possible.

GSETT-3 Operations: Status and Plans

Version 1 of GSETT-3 IDC completed successful operations on 30 June 1994. As is shown in the table below 12 Alpha stations were sending continuous data to the IDC as of August 1. These are ARCESS, NORESS and Spitzbergen, (Norway); FINESS (Finland); GERESS(Germany); Pinedale(US); Mould Bay and Waterton Lakes (Canada); Alice Springs, Woolibar and Armidale (Australia) and Mawson (Antarctica). It is expected that there could be about 23 Alpha stations contributing by the end of August. The slow rate at which new stations are being added is a concern, in that a significant amount of work is involved to establish reliable communications between the station and the IDC, and to train both the automated software and the analysts to interpret the data correctly.

	1 Feb 1994	**1 Aug 1994**	**Planned 1995**
Alpha Stations	6	12	57
w/continuous data to IDC	0	12	57
Beta Stations	13	21	>100
Coverage	European	Sparse global	Global
Countries submitting			
Gamma data	1	5	?
Volume data/day to IDC	0.2 Gbytes	1.5 Gbytes	~10Gbytes
Data Days	78	122	daily
Events in REB	19/day	22/day	100-300/day
IDC Staff	27	30	45

Key systems implemented early in version 2a include the regular submission of continuous Alpha data using the new GSE Alpha protocol and retrieval and provision of data using the new GSE message and upgrade AutoDRM-type (automatic Data Request Manager) software. Installation of a new operating system at the IDC (Solaris 2.3) necessitated major changes to the IDC operational software. The most important software to be implemented within the IDC during the next several months includes upgraded signal processing, automatic association, magnitude, long period processing and data access software.

International staffing of the IDC is another important objective of the Working Group on Operations. During the session applications for positions at the IDC were reviewed and qualified applicants were selected. Offers will be extended to the successful applicants.

ANNEX IV

Status report from GSETT-3 working group on evaluation

At the 37th session of the GSE, the working group (WGE) tabled a draft of the Evaluation volume of the GSETT-3 Documentation (GSE/WGE/5).

This draft was reviewed at the informal workshop held in Alexandria, USA, last April, and resulted in a number of changes to WGE/5.

Subsequently, chapter 4 of WGE/5 (on NDCs) has been rewritten. A revised version of WGE/5, including the results of the discussions in Alexandria and the new chapter 4, was included in the documentation set mailed to all GSE members last July.

During the Alexandria workshop, WGE members visited the IDC in order to:

(i) determine to what extent the statistics required for evaluation are already being, or could readily by, produced by the IDC.

(ii) develop a draft procedure for a quality assurance evaluation of the IDC.

It was established that the IDC can indeed provide much of the information required for the evaluation of GSETT-3. An assessment of the current and possible capability of the IDC to do this was prepared by IDC staff and was discussed by the WGE during this session.

Many of the tasks outlined in the Evaluation volume can however only be carried out by the NDCs or as national investigations.

Most delegations in response to a questionnaire identified particular aspects of evaluation to which they intend to contribute (see the attached table).

NDCs may participate in the evaluation either through an interactive computer program (now being produced), by reporting evaluation information to the IDC in a format that is described in the "formats" annex of the GSETT-3 documentation set, or if necessary by other means.

GSE delegates are urged to review these formats and comment upon their suitability and completeness.

The draft IDC "Quality Assurance Evaluation" will be added as an annex to the GSETT-3 Documentation set.

Several national investigations provided preliminary evaluation of detection and location capabilities of the present limited GSETT-3 network. These studies are being used to help define a standardised procedure for future evaluations of this type. The WGO, in its GSE/WGO/Informal 2 provided comments on this preliminary analysis.

Schedule for future work

- The IDC quality assurance evaluation is tentatively scheduled for October 1994 and is expected to last 4-5 weeks. Selected items should however, if possible, be evaluated earlier.

- The WGE will meet in early January, at the EIDC, in order to assess and prepare a report on the overall state of readiness for GSETT-3 on 1 January 1995. This report will be presented at the next GSE meeting (February 1995).

- As various aspects of GSETT-3 (e.g. sufficient number of stations, formats, etc.) are finalized, it will become possible to evaluate these aspects in a preliminary way - e.g. detection/location capability in certain parts of the world (national investigations presented at this session; stations noise characteristics, etc.).

- Develop an "action plan" to coordinate the work of those contributing to the different aspects of GSETT-3 evaluation.

Country	Willing to Help	Areas of Involvement	Weekly Evaluation Reports
Argentina	Yes	SEIS	Yes
Australia	Yes	NDC, IDC, COM	Yes
Austria			
Belgium	Yes	GI, S&N, SEIS	Yes
Bulgaria	Yes	SEIS	Yes *
Canada	Yes	GI, IDC, COM, S&N, SEIS	Yes
China	Yes	S&N, SEIS	? *
Czech Republic	? *	NDC, SEIS	Yes *
Denmark	Yes	SEIS	Yes
Egypt			
Finland	Yes	GI, NDC, S&N, SEIS	Yes
France	Yes	GI, SEIS	Yes
Germany	Yes	IDC	Yes *
Hungary	? *	SEIS	No *
India			
Iran			
Israel			
Italy	Yes	SEIS	Yes
Japan	Yes	SEIS	Yes
Korea, Republic of	Yes	S&N	No
Netherlands	Yes	GI, S&N, SEIS	Yes
New Zealand	Yes	NDC, SEIS	Yes
Norway	Yes	IDC, SEIS	Yes
Pakistan	Yes	NDC	Yes
Peru	Yes	SEIS	No *
Poland	No	SEIS	No *
Russian Federation	Yes	NDC, IDC, SEIS	Yes
South Africa	Yes	NDC, S&N	Yes *
Spain	Yes	GI, NDC, SEIS	Yes
Sweden	Yes	GI, IDC, S&N, SEIS	Yes
Switzerland	Yes	NDC, IDC, SEIS	Yes
United Kingdom	Yes	NDC	Yes
United States	Yes	ALL	Yes

GSE Participation in GSETT-3 Evaluation

Key: * = under discussion @ = expected later GI = General Issues
SEIS = Seismological S&N = Stations and Networks COM = communications

ANNEX V

Draft work programme for the next (40th) session

1. Review of initial results from the full-scale GSETT-3 testing
   - IDC reports
   - National reports by participants
2. Preliminary evaluation of the GSETT-3 system and its initial results
3. Discussion of modifications to GSETT-3 procedures needed in the light of these experiences
4. Presentation and review of national investigations into relevant matters
5. Discussion of future plans
6. Answer possible questions relating to GSETT-3 from the NTB Ad Hoc Committee or its Working Group on Verification
7. Submission of a progress report to the CD
8. Other matters

CONFERENCE ON DISARMAMENT

CD/1270/Corr.1
31 August 1994

Original: ENGLISH

PROGRESS REPORT TO THE CONFERENCE ON DISARMAMENT
ON THE THIRTY-NINTH SESSION OF THE AD HOC GROUP OF
SCIENTIFIC EXPERTS TO CONSIDER INTERNATIONAL COOPERATIVE
MEASURES TO DETECT AND IDENTIFY SEISMIC EVENTS

Corrigendum

Page 2, paragraph 10, first and second line:
For 58 stations in 34 countries, read 59 stations in 35 countries

Page 7, fourth paragraph, first line:
For 58 stations in 34 countries, read 59 stations in 35 countries

Pages 5 and 6: replace with attached new table and map

GE.94-64155

Annex I: Status of GSETT3 Station and Gamma Data Commitments

Country	Alpha Stations Envisaged by GSE	Beta Stations Offered	Station Commitment Status	Date Available to the IDC	Gamma Data Committed
Argentina	1	-	committed	Dec. 1994	yes
Australia	5	11	committed	Aug./Sept.1994	yes
Austria	0	1	lacking	unknown	-
Belgium	0	0	not applicable	not applicable	yes
Bolivia	1	-	lacking	unknown	-
Botswana	1	-	lacking	unknown	-
Brazil	1	0	committed	unknown	-
Bulgaria	0	1	committed	July 1995	yes
Canada	6	18	committed	Now/Sept. 1994	yes
Cen. Afr. Republic	1	-	committed	unknown	-
China	3*	1	lacking	unknown	-
Cook Islands	0	1	committed	now	-
Czech Republic	0	1	committed	Sept. 1994	yes
Denmark	1*	0	lacking	July 1995	yes
Egypt	1*	0	lacking	unknown	-
Finland	1	4	committed	now/Nov. 1994	yes
France	1	0	committed	Jan. 1995	yes
Germany	1*	9	lacking	unknown	-
Hungary	0	1	committed	now	yes
India	1	0	committed	unknown	-
Indonesia	1	-	lacking	unknown	-
Iran	1*	1	lacking	June 1995	yes
Israel	0	1	lacking	Nov. 1994	-
Italy	0	2	committed	now	yes
Ivory Coast	1	-	lacking	unknown	-
Japan	1	7	committed	Sept. 1994	yes
Kazakhstan	1	-	lacking	unknown	-
Kenya	1	-	lacking	unknown	-
Rep. of Korea	1	-	lacking	unknown	-
Mexico	1*	2	lacking	unknown	-
Netherlands	0	1	committed	Aug. 1994	yes
N. Africa (XAF)	1	-	lacking	unknown	-
New Zealand	0	1	committed	now	yes
Norway	3	1	committed	now/Oct. 1994	yes
Pakistan	1	1	committed	expect Jan.1995	-
Papua New Guinea	1	-	lacking	unknown	-
Paraguay	1	-	lacking	unknown	-
Peru	0	1	committed	Dec. 1994	-
Poland	0	1	lacking	unknown	yes
Romania	0	1	committed	Sept. 1994	yes
Russian Federation	5	5	committed	Jan. 1995	-
S. America (XSA)	1	-	lacking	unknown	-
South Africa	1	1	committed	Aug./ Dec. 1994	yes
Spain	1	2	committed	Jan. 1995	yes
Sweden	1	0	committed	Sept. 1994	yes
Switzerland	0	1	committed	Jan. 1995	yes
Thailand	1	-	lacking	unknown	-
Turkey	1	-	lacking	unknown	-
Turkmenistan	1	-	committed	unknown	-
United Kingdom	0	2	committed	Oct. 1994	yes
United States	7	12	committed	Aug - Nov. 1994	yes
Western Samoa	0	1	committed	now	-
Zambia	0	1	lacking	unknown	-
TOTAL (Committed)	59 (38)	93 (76)	29 Countries		24

* See Annex II for additional details

- Array
- 3-Comp.
- 3-Comp., with array planned

PRELIMINARY GSETT-3 ALPHA NETWORK
AS OF 19 AUGUST 1994

CONFERENCE ON DISARMAMENT

CD/1271
24 August 1994

Original: ENGLISH

REPORT OF THE AD HOC COMMITTEE ON
PREVENTION OF AN ARMS RACE IN OUTER SPACE

I. INTRODUCTION

1. At its 666th plenary meeting on 25 January 1994, the Conference on Disarmament re-established an Ad Hoc Committee on the item "Prevention of an Arms Race in Outer Space" with the mandate contained in document CD/1125 of 14 February 1992.

II. ORGANIZATION OF WORK AND DOCUMENTS

2. At its 669th plenary meeting on 3 February 1994, the Conference on Disarmament appointed Ambassador Perez Novoa of Cuba as Chairman of the Ad Hoc Committee. Mr. Vladimir Bogomolov, Political Affairs Officer, United Nations Centre for Disarmament Affairs, continued to serve as the Committee's Secretary.

3. The Ad Hoc Committee held 19 meetings between 15 February and 23 August 1994.

4. In addition to the documents of the previous sessions[1/] the Ad Hoc Committee had before it the following documents relating to the agenda item submitted to the Conference on Disarmament during the 1994 session:

1/ The List of Documents of the previous Sessions may be found in the 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992 and 1993 Reports of the Ad Hoc Committee (CD/642, CD/732, CD/787, CD/870, CD/956, CD/1039, CD/1111, CD/1165 and CD/1217 respectively), and in the special report to the Third Special Session of the General Assembly devoted to Disarmament (CD/834).

CD/OS/WP.68	1994 Programme of Work
CD/OS/WP.69	Draft Guidelines regarding Measures on Confidence Building and Predictability in Outer Space Activities (by Alexander V. Vorobiev, Friend of the Chairman)
CD/OS/WP.70	Paper by Professor N. Ronzitti (Italy), (Friend of the Chair on Terminological and Legal Issues) - Legal Definitions
CD/OS/WP.71	Questionnaire on Legal and Terminological Issues - (Friend of the Chair, Professor N. Ronzitti, Italy)
CD/OS/WP.72	Outer Space and Modern Conflict - Some Reflections on Military and Security Related Space Uses and Associated Legal Policy Issues - (Dr. Wulf von Kries, Germany)
CD/OS/WP.73	Runaway proliferation of orbital debris: security implications and possible cooperative responses - (Professor P. Farinella, Italy)
CD/OS/WP.74	Summary of Experts' Presentations
CD/OS/CRP.16 and Corr.1[2/]	Resumé by the Friend of the Chairman of Proposals and the Course of Discussions on Confidence-Building Measures in Outer Space

III. SUBSTANTIVE WORK DURING THE 1994 SESSION

5. Following consultations on the organization of work at its first meeting on 15 February 1994, the Ad Hoc Committee adopted the following Programme of Work for the 1994 Session:

"1. Examination and identification of issues relevant to the prevention of an arms race in outer space.

2. Existing agreements relevant to the prevention of an arms race in outer space.

3. Existing proposals and future initiatives on the prevention of an arms race in outer space.

In carrying out its work with a view to finding and building upon areas of convergence, the Ad Hoc Committee will take into account relevant proposals, initiatives and developments since the establishment of the Committee in 1985 including those presented at the 1993 session of the Conference on Disarmament.

The practice of appointing Friends of the Chairman to organize open-ended consultations on issues of specific interest to the Committee should continue."

2/ CD/OS/CRP.16/Corr.1* - reissued in English only

6. The Ad Hoc Committee agreed that it would give equal treatment to the subjects covered by its mandate and specified in its Programme of Work. Accordingly, the Committee agreed to allocate the same number of meetings to each of those subjects, while any member wishing to do so may discuss any subject important and relevant to the work of the Committee.

7. The work of the Ad Hoc Committee was governed by the mandate which aims at the Prevention of an Arms Race in Outer Space.

8. During the meetings of the Ad Hoc Committee, various Groups and individual delegations reaffirmed their respective positions which can be found in the previous annual reports of the Committee, related Conference documents and Working Papers, and Plenary Records, or further elaborated on them as indicated in subsequent paragraphs.

9. The Ad Hoc Committee once again benefitted from the scientific and technical contributions of experts from various delegations, who addressed the following specific issues and initiatives under consideration in the Committee:

- "Feasibility of different measures envisaged for a Code of Conduct" - Mr. F. Alby (France)
- "Runaway proliferation of orbital debris: security implications and possible cooperative responses" - Professor P. Farinella (Italy)
- "Outer Space and Modern Conflict - Some Reflections and Security Related Space Uses and Associated Legal Policy Issues" - Dr. W. von Kries (Germany)

The summary of those presentations is contained in document CD/OS/WP.74 dated 15 August 1994. The Committee expressed its appreciation to the delegations who provided these contributions.

10. The Ad Hoc Committee carried out substantive work on legal and terminological issues and on confidence-building measures during the consultations held by the Friends of the Chair who were appointed by the Chairman to deal with the following issues without prejudice to positions of delegations in open-ended consultations:

(i) confidence-building measures in outer space (Mr. Alexander V. Vorobiev, Delegation of the Russian Federation)

(ii) terminology and other relevant legal aspects related to prevention of an arms race in outer space (Mr. Natalino Ronzitti, Delegation of Italy).

Summary of the efforts of the Friends of the Chairman

(a) On legal and terminological issues the discussion in the Committee was stimulated by Questionnaires and Working Papers submitted by the Friend of the Chair (documents CD/OS/WP.70 dated 1 July 1994 and CD/OS/WP.71 dated 1 August 1994). These papers took stock of the work already done in previous years on this subject and of existing proposals. The questionnaire (document CD/OS/WP.71) was drafted in order to find out, inter alia, whether the existing Space Treaties were sufficient for the prevention of an arms race in outer space and, in the event of a negative response, what kind of legal instrument or measures should be employed for filling in any existing lacuna. In this context besides drafting new instruments, other legal techniques were also explored, such as Treaty revision, the conclusion of additional protocols, the establishment of CBMs complementing existing Agreements, or the conclusion of a new international agreement or agreements. Delegations found the question of terminological issues important, even though it was generally held that the completion of work on terminology was not a conditio sine qua non for negotiating new instruments or measures for the prevention of an arms race in outer space. Since many existing instruments contained legal definitions, the Friend of the Chair suggested that a possible approach might consist of making a compilation of terms already defined. In effect, definitions of legal terms could be found both in multilateral and bilateral Treaties on outer space and, to a certain extent, even in recent resolutions. Existing proposals also could constitute a source of definitions of legal terms.

(b) The Friend of the Chair on confidence-building measures proposed to the Committee to discuss CBMs on the basis of the table contained in document CD/OS/WP.58 dated 12 March 1993. The delegations agreed to this proposal and considered individually each of the three main clusters of CBMs as set out in the table: measures to improve the transparency of pre-launch activities; rules-of-the-road measures; and measures required for monitoring purposes in connection with the proposed code of conduct. Proceeding from the course of the discussions on the substance of the confidence-building measures which took place in the Ad Hoc Committee during the first part of the 1994 session and previous years, the Friend of the Chair presented, at his own discretion, a resumé of the existing proposals and the discussions held (CD/OS/CRP.16 of

17 May 1994) and the "Draft Guidelines regarding measures on confidence-building and predictability in outer space activities (CD/OS/WP.69 of 1 July 1994). The latter Working Paper also contained a questionnaire which covered some of the bigger issues raised by the delegations in regard to the Draft Guidelines. Some of the initial observations of the delegations regarding the Draft Guidelines concerned the format of the document and its choice of CBMs. At the same time, an observation was made that the Draft Guidelines could serve as a possible basis for further work on CBMs. The Friend of the Chairman proposed to depart from the discussions on the format of the document on CBMs and to come to this issue when a better understanding on the substance of the CBMs in outer space was reached. At the subsequent consultations the delegations commented on the scope of the exchange of information and notifications, as well as the time frame for providing them, on the establishment of an international outer space monitoring system and a communications network, and on the issue of whether elaborate notifications for space objects with nuclear power sources and assessment of compliance should be part of the CBMs régime. Pointing to the need for more comments from the delegations for that purpose, the Friend of the Chairman proposed to try at the next session to incorporate the views of the delegations in the Draft Guidelines or another consolidated document.

The Committee voiced its appreciation of the work by the Friends of the Chair and their organization of open-ended consultations.

Summary of the general discussions

11. During the annual session in the course of the debates, as well as in the open-ended consultations, the attention of the Committee was drawn to the issues of the adequacy of the current legal régime, confidence-building measures in outer space activities, and terminological aspects of the work of the Committee.

12. Members of the Group of 21 and China maintained that the prevention of an arms race in outer space would pave the way for the exploration and peaceful uses of outer space solely for the common interest and benefit of mankind. Those delegations emphasized that the existing legal instruments relating to outer space were far from effective in preventing an arms race in outer space. The same delegations, as well as the Russian Federation, pointed out

that those legal instruments did not prevent launching into space and testing in space of conventional weapons as well as weapons based on new physical principles, such as lasers, very high frequency weapons, particle beam weapons and others. Delegations of the Group of 21 and China expressed concern that given the similarities of requisite technology, the unrestrained development of ballistic missile defences could lead to development of ASAT weapons. These delegations further shared the views expressed by, inter-alia, the delegations of Indonesia and China that certain space powers were still engaged in activities which may lead to an arms race in outer space. In this respect they felt that States with advanced technology and capabilities had special responsibilities for the discontinuance of all weapon-related activities adversely affecting the peaceful uses of outer space. They were of the view that the Ad Hoc Committee had also to address the question of the demilitarization of outer space. The above-mentioned delegations maintained that the task of preventing an arms race in outer space was still of importance and urgency. They believed that the international political situation was now conducive to the conclusion of a treaty banning an arms race in outer space which should be universal, comprehensive, legally-binding, multilateral and effectively verifiable. Some members of the Group of 21 stressed that the voluminous and relevant documentation produced in the Ad Hoc Committee since its establishment in 1985 on the subject could constitute a basis for the rapid elaboration of a legal régime that prevents an arms race in outer space. They suggested that the Committee should examine, inter alia, the proposals which had been made over the years to amend Article IV of the Outer Space Treaty of 1967 to include the prohibition of all types of space weapons. Some of them specifically referred to the idea of a ban on the testing, development and deployment of ASATs. In this regard, this group of delegations stressed that the Committee should also examine the reinforcement of existing legal instruments by more effective implementation and broader participation of States. Germany and Algeria felt that the time was right to put into practice the concrete proposals made by France, the former USSR, and Canada, with regard to the setting up of international agencies under the auspices of the UN, entrusting them with monitoring functions in outer space.

13. Some delegations of the Western Group considered that the UN Charter, the existing multilateral treaties relating to outer space, and the outer space related arms control provisions of other multilateral and bilateral treaties

(such as the 1963 Partial Test Ban Treaty, the 1972 ABM Treaty, the 1977 ENMOD Convention, the 1986 Convention on Assistance in case of a Nuclear Accident or Radiological Emergency, the 1992 International Telecommunication Constitution and Convention, and the 1993 START II Treaty), together with customary international law, as well as the domestic law of individual nations, interacted and complemented each other in such a way, that together they provided an equitable, practical, balanced and extensive legal system for ensuring the use of outer space for peaceful purposes. Those delegations maintained that there was no arms race in outer space, nor was there any indication of significant on-going development by any State with respect to arms in space. Therefore, in their view there was no need for new legally-binding instruments, or a need to revise existing agreements in this respect. Instead, wider adherence to existing Agreements should be encouraged.

14. Some delegations of two regional Groups stated that the end of the "cold war" had brought considerable changes to the major space Powers' activities and to their national legislature. In particular it was mentioned that in August 1993 the "Law of the Russian Federation on the space activity" had been adopted which corresponded to the existing international obligations of the country regarding the prevention of an arms race in outer space, and in certain aspects went even further. In March 1994 the USA announced a new policy on "foreign access to remote sensing space capabilities". It was characterized as an attempt in space-related security regulation and an example of the emerging need for concerted policy and legal action by the international community in the domain of "space for security" uses.

15. Various members of different regional groups viewed CBMs primarily as an important step on the way to the prevention of an arms race in outer space; others viewed CBMs, as such and independently, as useful measures which could increase confidence in relation to States' activities in outer space. In this regard, some delegations addressed anew, or further developed, proposals aimed at increasing the transparency of space operations generally, the range of information concerning satellites in orbit, as well as those that would establish rules of behaviour governing space operations. Some delegations suggested that the Committee should take advantage of the commonly shared view on the stabilizing role of CBMs and should start developing concrete CBMs, once their relevance and feasability for arms control purposes would be agreed

upon. In this connection some delegations furthermore proposed that the Committee start developing a régime of notification of launches of space objects and ballistic missiles which would supplement the 1975 Registration Convention, as well as CBMs on "rules of the road" relating to space debris, manoeuvres in outer space, or the establishment of keep-out zones. Some delegations also noted that the growing convergence of views on the elaboration of measures designed to strengthen transparency, confidence and security, could facilitate developing concrete CBMs. Delegations of the Group of 21 and China emphasized that because of the supplementary and interim nature of CBMs, work in the Ad Hoc Committee should not be devoted solely to the formulation of CBMs and should in no way detract, retard or negatively affect, the attainment of its primary objective, namely, the conclusion of an international agreement, or agreements, on the prevention of an arms race in outer space, with a view to reinforcing the existing legal régime. Delegations of the Group of 21 felt that work on CBMs should be carried out in parallel with the primary concern and objective of the Ad Hoc Committee. Those delegations, along with China, believed that any CBMs agreed to should be ones which could form part of a legally-binding, multilaterally negotiated instrument on the prevention of an arms race in outer space. Egypt suggested that the countries with space activities could also voluntarily implement CBMs which they may agree to amongst themselves. Some delegations of the Group of 21 proposed that transparency and CBMs in outer space should be comprehensive and notification of space objects should extend to those objects launched in the past, even prior to 1975, and not limited only to the objects to be launched in the future. Some delegations of the Western Group, one delegation of the Eastern European Group, as well as one delegation not belonging to any regional Group, were of the opinion that this latter proposal was neither useful nor realistic.

16. China, Egypt and India reiterated that work on terminology should serve the basic purpose of formulating new international legal instruments aimed at prevention of an arms race in outer space. Egypt and India stated that harmonization of work was however not likely unless a negotiating mandate is given to the Ad Hoc Committee. China further considered that the initial work on terminology should be the identification and clarification of relevant terms.

IV. CONCLUSIONS

17. Closer coordination between the Ad Hoc Committee on Prevention of an Arms Race in Outer Space and the Committee on Peaceful Use of Outer Space on the issues of mutual concern was favoured.

[18. It was agreed that substantive work on all these issues should continue at the next session of the Conference. Therefore, it was recommended that at the beginning of the 1995 session, the Conference on Disarmament re-establish the Ad Hoc Committee on Prevention of an Arms Race in Outer Space with an appropriate mandate, taking into account the work undertaken since 1985.]*

---

* The brackets requested by the Western Group at the last meeting of the Ad Hoc Committee held on 23 August 1994 are not related to the substantive issues discussed by the Committee.

CONFERENCE ON DISARMAMENT

CD/1272
CD/NTB/WP.178
24 August 1994

ENGLISH
Original: CHINESE/ENGLISH

LETTER DATED 23 AUGUST 1994 FROM THE HEAD OF THE DELEGATION OF THE PEOPLE'S REPUBLIC OF CHINA TO THE CONFERENCE ON DISARMAMENT ADDRESSED TO THE PRESIDENT OF THE CONFERENCE ON DISARMAMENT TRANSMITTING THE TEXT OF A STATEMENT MADE BY COUNSELLOR HU XIAODI OF THE CHINESE DELEGATION ON 19 AUGUST 1994 AT THE AD HOC COMMITTEE ON A NUCLEAR TEST BAN

I have the honour to transmit to you herewith the text of a statement made by Counsellor Hu Xiaodi of the Chinese delegation on 19 August 1994 at the NTB Ad Hoc Committee.

I would be grateful if this text could be circulated as an official document of the Conference on Disarmament and a working paper of the NTB Ad Hoc Committee.

(Signed): Hou Zhitong
Ambassador Extraordinary
and Plenipotentiary
for Disarmament Affairs,
Head of the Delegation
of the People's Republic
of China to the CD

GE.94-63977 (E)

STATEMENT MADE ON 19 AUGUST 1994 BY COUNSELLOR HU XIAODI OF CHINA TO THE AD HOC COMMITTEE ON A NUCLEAR TEST BAN

Mr. Chairman,

I have been directed by the Chinese Government to raise the following points with the CD Ad Hoc Committee on a Nuclear Test Ban, and would request you, Sir, and the Committee to take note and put them on record.

Documents CD/NTB/WP.158 and GSE/US/99 have recently been circulated in the Conference and the Ad Hoc Committee. These two documents, on page 7 and the last page respectively, list Beta stations that it is proposed to establish in over 60 countries. Below China, Russia, Japan and so forth there appears the name "Taiwan", associating Taiwan with the names of over 60 countries. In addition, the appellation "Republic of China" has appeared in some materials.

It must be pointed out that the above state of affairs is not proper in the Conference on Disarmament and its ad hoc committees, and that this is a serious matter. It goes without saying that the Ad Hoc Committee on a Nuclear Test Ban and the Group of Seismic Experts are subsidiary bodies of the Conference and should function strictly in accordance with its rules of procedure and pertinent resolutions. States Members of the United Nations must abide strictly by the Charter and the resolutions of the Organization.

Mr. Chairman,

As everyone is aware, there is on this Earth only one China, of which Taiwan is a part. The Government of the People's Republic of China is the sole legitimate Government that represents the whole of China, and has been recognized by the United Nations, the Conference on Disarmament and the international community, including all the countries with which it has diplomatic relations. We are resolutely opposed to any practices that might create or promote "two Chinas" or "one China, one Taiwan".

The Chinese delegation has been directed by the Chinese Government to announce that this state of affairs that has arisen in the Conference on Disarmament and its subsidiary ad hoc committees, on a nuclear test ban and so forth, is unacceptable. We again request the United States delegation to rectify the matter. We ask you, Mr. Chairman, and through you, the Conference on Disarmament and its secretariat to take the necessary measures.